

inch, N., clear; Hiroshima, 30.33, a rise of 0.11 inch, NNE., clear; Nagasaki, 30.37, a rise of 0.11 inch, NNE., clear. During the day the depression disappeared eastward over the ocean. No. XXVII.—This depression appeared in southeastern China on the 28th. S. S. *Monocacy*, U. S. N., at Shanghai, barometer 29.80, a fall of 0.22 inch, S., force 1, clear; S. S. *Palos*, U. S. N., at Shanghai, barometer 29.83, a fall of 0.22 inch, SSE., force 2, cloudy. 29th, position of central disturbance uncertain, probably south of the Island of Kiusin. Hiroshima, 29.98, a fall of 0.03 inch, NNE., fair; Nagasaki, 30.01, N., threatening; Tokei, 29.65, a fall of 0.35 inch, NW., 13 miles, 1.22 inches rain-fall in past 24 hours, raining; Wakayama, 29.86, a fall of 0.19 inch, NW., cloudy. 30th, Hiroshima, 29.88, a fall of 0.10 inch, W., fair; Nagasaki, 29.87, a fall of 0.14 inch, SE., clear; Tokei, 30.05, a rise of 0.40 inch, ENE., cloudy; Wakayama, 29.94, a rise of 0.08 inch, N., cloudy. 31st, Hiroshima, 29.88, no change, N., fair; Nagasaki, 29.99, a rise of 0.13 inch, WNW., clear; Wakayama, 29.73, a fall of 0.21 inch, WNW., 13 miles, clear; Tokei, 29.43, a fall of 0.62 inch, 17.78 m.m. rain-fall in past 24 hours, cloudy. April 1st, Hiroshima, 30.03, a rise of 0.15 inch, NNE., clear; Wakayama, 30.01, a rise of 0.28 inch, N., cloudy; Tokei, 29.87 a rise of 0.44 inch, NNW., clear. During the previous day the depression disappeared eastward over the ocean.

Ocean Ice.—January 30th, 1882. In 47° 30' N., 48° 35' W., S. S. *Glamorgan* passed large iceberg about 40 feet high. On February 1st, the same steamer passed in 46° 43' N., 52° 24' W., a great quantity of field ice extending 40 miles in length. 9th, in 47° 30' N., 47° W., S. S. *Averill*, reported a large quantity of field ice and several large icebergs. 11th, in 46° 30' N., 45° 30' W., S. S. *Australia*, passed through large quantities of field ice and saw several icebergs; in 46° 34' N., 48° 37' W., S. S. *Pollux* reported large quantities of field ice; in 47° 19' N., 47° 18' W., S. S. *Vandalia*, reported large quantities of field ice; in 46° N., 46° W., S. S. *Brooklyn City* saw large iceberg and four hours later large packs of ice. 15th, in 47° 05' N., 44° 30' W., S. S. *P. Caland* passed large iceberg and considerable quantities of floating ice up to 45° 40' N., 46° 43' W. 16th, in 47° 50' N., 46° 30' W., S. S. *Thingralla* passed large quantities of field ice and several icebergs; in 46° 20' N., 47° 18' W., S. S. *Assyrian* passed large iceberg. 17th, in 47° 10' N., 46° 50' W., S. S. *Ethiopia* passed iceberg and large quantities of field ice. 18th, in 46° 20' N., 45° 55' W., in 46° N., 46° 55' W., and in 46° 20' N., 47° 16' W., S. S. *Bolivia* passed several large icebergs; in 45° 57' N., 47° 54' W., S. S. *The Queen* passed large iceberg and field ice. 19th, in 46° 10' N., 46° 30' W., S. S. *Cimbria* passed large quantities of field ice, vessel compelled to sheer south for 12 hours; in 47° 40' N., 43° 28' W., S. S. *State of Indiana* passed large iceberg. 20th, in 46° 21' N., 41° 40' W., S. S. *Cornwall* passed several large icebergs and some field ice; in 46° 30' N., 47° 25' W., S. S. *Plantyn* passed iceberg about 100 feet in height, and four hours afterward a large ice island; Brig *Trusty* at Trepassy from Crookhaven, passed 300 miles of drift ice off the coast of Newfoundland. 21st, in 45° 19' N., 49° 58' W., S. S. *Cornwall* passed several large icebergs and some field ice.

TEMPERATURE OF THE AIR.

The distribution of mean atmospheric temperature over the United States and Canada for the month of February, 1882, is exhibited by lines of equal thermometric mean values upon chart No. II. The table of mean and comparative temperatures in the right-hand corner of the chart shows, in the first column, the average for the month throughout the various districts, as deduced principally from observations taken at Signal Service stations. In the two remaining columns are shown the means for the present month, and the departures of such means from the average for many years. The temperature is everywhere above the normal east of the 107th meridian, the departures of excess ranging from 2°.5 in New England to 9°.9 in the Upper Mississippi Valley. Six districts report a mean temperature, which on the average is 8° or more above

the normal. Throughout the remainder of the country the temperature is below the normal, the departures of deficiency ranging from 1°.7 in the Southern Plateau to 7°.2 in the Middle Plateau. All of the districts but one, comprising this area, report a mean temperature which on the average is nearly 6° below the normal. As a means of interesting comparison, the following maximum departures from the normal are given for each year since 1874, together with the corresponding districts: 1875, -17°, Minnesota and -15°.2 Upper Lake Region; 1876, +4°.7 Lower Missouri Valley and +4°.6 Upper Mississippi Valley; 1877, +13°.4 Minnesota, +11°.5 Upper Mississippi Valley and +10°.9 Lower Missouri Valley; 1878, +18°.7 Minnesota, +16°.4 Upper Missouri Valley and +13°.3 Upper Mississippi Valley; 1879, +8°.3 Salt Lake City, +7°.1 Tucson and -6°.4 St. Lawrence Valley; 1880, +6°.5 Lower Lake Region, +6°.2 Middle Atlantic States and -5°.3 Northern Rocky Mountain Slope; 1881, -6°.0 Missouri Valley, -5°.0 Middle Rocky Mountain Slope and Upper Mississippi Valley and +6°.3 Salt Lake City.

Deviations from Mean Temperatures.—Under this heading departures exhibited by the reports from the regular Signal Service stations are shown in the table of comparative temperatures on the right-hand side of chart No. II. The following items of importance, in connection with this subject, are reported by Voluntary Observers: *Illinois*: Riley, mean temperature, the highest ever recorded at this place, being 10°.2 above the mean of February for the past 21 years, and 1°.6 above the highest monthly mean previously recorded, which occurred in 1878. Its maximum temperature has not been exceeded during that period, but was just equal in February, 1861. Mean temperature of winter of 1881-2 is 27° 8 or 6° 8 above the average of the past 19 winters; only the winters of 1870-1 and 1877-8 were warmer; the mean temperature of the winter of 1862-3 was just equal. The maximum temperature of past winter has only been exceeded once, viz., in December, 1877; the minimum of each winter during the past 19 years has been lower than that of the past winter. *Indiana*: Vevay, mean temperature, 45° 52 or 10° above the average of the past 17 years, and 19° 5 above the mean of the coldest month (February, 1875) which was reported during that period. Maximum temperature for February, 1882, is 5° lower than that of 1866 and 1869. *Iowa*: Clinton, mean temperature nearly 12° above the average. *Kansas*: Manhattan, mean temperature 40° 4 or 8° 09 above the average of the past 22 years; highest mean during that period, 39° 18, occurred in 1878, and the next highest, 36° 93, occurred in 1876. Wellington, mean temperature 40° 1 or 6° 2 above the average of the past 3 years. Lawrence, mean temperature 41° 65 or 8° 66 above the average of the past 14 years; during that period the highest mean, 40° 22, occurred in 1878, and the lowest, 25° 78, occurred in 1881. Yates Centre, mean temperature, 39° 6 or 9° 6 above the mean of past 2 years. *Maine*: Gardiner, mean temperature 21° 13 or 0° 53 above the average of the past 46 years. *Maryland*: Fallston, mean temperature, 36° 8, which is the highest, with the exception of 1880, that has occurred during the past 12 years. *Michigan*: Thornville, mean temperature fully 10° above the average of the past 15 years. *Missouri*: St. Louis, Missouri Weather Service reports mean temperature 43° 8 or 8° 6 above the average of the past 45 years; 0° 3 below the mean of the warmest February, which occurred in 1845, and 23° above the mean of the coldest February, which occurred in 1838. *New Hampshire*: Contoocookville, mean temperature 25° 3 or nearly 3° 0 above the February average for the past 12 years. *New York*: North Volney, mean temperature 28° 39 or 6° 34 above the average of the past 13 years; the highest February mean for that period, 27° 93, occurred in 1877, and the lowest mean, 13° 19, occurred in 1875; mean temperature for winter of 1881-2 at 7 a. m., 25° 16; 2 p. m., 32° 47; 9 p. m., 27° 58; mean for winter, 28° 14; average winter mean for past 13 years, 23° 21; highest winter mean, 28° 67, occurred in 1880; lowest winter mean, 17° 79, occurred in 1875. Palermo, mean temperature, 26° 4 or 5° above the average of February for the past 29 years;

during that period the highest mean, 27°.6, occurred in 1878; lowest 12°.6 occurred in 1875. *Ohio*: Cleveland, mean temperature 37°.53, which has not been equalled or exceeded during the past 27 years, and is 8°.56 above the average for that period; the lowest February mean 17°.01 occurred in 1875.

Table of Maximum and Minimum Temperatures for February, 1882.

State or Territory.	Signal Service.			U. S. Army Post Surgeons or Voluntary Observers.		
	Station.	Max.	Min.	Station.	Max.	Min.
Alabama	Montgomery	89	82	Auburn	9	15
Arizona	Tucson	74	5	Maricopa	92	16
Do	Prescott	77	5	Mount Ida	74	16
Arkansas	Little Rock	77	25	Fort Yuma	78	12
California	Los Angeles	77	17	Fort Bidwell	60	18
Do	Campo	68	4	Fort Lyon	52	6
Colorado	Pike's Peak	68	17	Fort Garland	52	6
Do	New London	66	7	Fort Randall and Olivet	70	26
Connecticut	St. Sully	67	35	Fort Barrancas	72	12
Dakota	St. Sully	67	35	Quitman and Thomasville	80	12
Do	St. Sully	67	35	Geneseo	76	12
Delaware	Breakwater	61	24	Elmira	76	12
District of Columbia	Washington	63	20	Riley	68	12
Florida	Key West	63	15	Logansport	68	12
Do	Pensacola	75	37	Wabash	68	12
Georgia	Augusta	75	31	Cedar Rapids	72	12
Do	Savannah	78	31	Cresco	72	12
Idaho	Idaho	63	29	Clay Centre and Ft. Scott	76	12
Do	Idaho	63	29	Ft. Wallace	68	12
Illinois	Springfield	72	11	Bowling Green	68	12
Do	Chicago	75	11	Cornish and Orono	52	12
Indiana	Indianapolis	65	15	Dexter	52	12
Do	Indianapolis	65	15	Federalburg	64	12
Iowa	Fort Supply	75	12	Deer Park	64	12
Do	Keokuk	69	1	Westborough	64	12
Kansas	Des Moines	69	1	Niles	68	12
Do	Dodge City	69	1	Fort Brady	68	12
Do	Leavenworth	69	1	Ft. Snelling	68	12
Kentucky	Louisville	67	20	Fayette	78	12
Louisiana	New Orleans	79	23	Proctor	75	12
Do	Shreveport	79	23	Sedalia	75	12
Maine	Eastport	44	5	Geneon	62	12
Do	Eastport	44	5	Golconda	62	12
Maryland	Baltimore	59	23	Halleck	62	12
Do	Baltimore	59	23	Contoocookville	62	12
Massachusetts	Boston	60	3	Grafton	62	12
Do	Springfield	60	3	South Orange	62	12
Michigan	Detroit	58	2	Somerville	62	12
Do	Alpena and Marquette	58	2	Ft. Union	62	12
Minnesota	St. Paul	67	13	Johnstown	62	12
Do	St. Vincent	67	13	Leonor	62	12
Mississippi	Vicksburg	80	32	Westerville	62	12
Missouri	Saint Louis	73	13	Ft. Klamath	62	12
Do	Springfield	73	13	Dyberry	62	12
Montana	Fort Benton	62	13	Ft. Adams	53	12
Do	Terry's Landing	62	13	Columbia	78	12
Nebraska	North Platte	68	13	Kelton	62	12
Nevada	Pioche	62	6	Charlotte	54	12
Do	Winnemucca	61	17	Lunenburg	54	12
New Hampshire	Mt. Washington	35	21	Wytheville	54	12
New Jersey	Sandy Hook	52	18	Helvetia	54	12
Do	Barneget	52	18	Neillsville	54	12
New Mexico	La Mesilla	72	11	Ft. Washakie	54	12
Do	Santa Fe	72	11			
New York	New York City	62	7			
Do	Albany	62	7			
North Carolina	Wilmington	77	24			
Do	Smithville	77	24			
Ohio	Cincinnati	64	17			
Do	Cleveland	64	17			
Oregon	Umatilla	66	4			
Pennsylvania	Pittsburg	60	18			
Do	Philadelphia	60	18			
Rhode Island	Newport	53	10			
South Carolina	Charleston	78	32			
Tennessee	Memphis	78	25			
Do	Knoxville and Nashville	78	25			
Texas	Rio Grande City	92	13			
Do	Fort Elliott	92	13			
Utah	Salt Lake City	50	4			
Vermont	Burlington	51	4			
Do	Burlington	51	4			
Virginia	Cape Henry	74	19			
Do	Fort Myer	74	19			
Washington Ter.	Almota	54	14			
Do	Spokane Falls	54	14			
West Virginia	Morgantown	70	21			
Wisconsin	La Crosse	65	3			
Wyoming	Cheyenne	55	4			

curred in 1875. *Pennsylvania*: Wellsboro month will long be remembered as most exceptionally warm; mean temperature 32°.4 has not been equalled or exceeded during the past 20 years. *Texas*: Clarksville, mean temperature 59°.4, the high-

est that has occurred during the past 12 years. *Utah*: Coalville, mean temperature about 5° below the average of February for the past four years. *Vermont*: Woodstock, mean temperature 21°.42; mean for February from 1868 to 1882, inclusive, 16°.82; during that period the highest monthly mean, 23°.51 occurred in 1877 and the lowest, 9°.67, occurred in 1875. *Virginia*: Wytheville, mean temperature 41°.97 or 5° above the average of the past 18 years and 1° above the highest monthly mean that occurred during that period. *West Virginia*: Helvetia, mean temperature 40°.6 or 3°.31 above the average of the past 6 years.

Ranges of Temperature at Signal Service Stations.—Monthly ranges in general varied from 40° to 60° over the country east of the Rocky Mountains, and from 45° to 80° westward to the Pacific. The *smallest* ranges are: San Francisco, 23°; Key West, 24°; Port Eads, 31°; Punta Rassa and Sacramento, 32°; Atlantic City, Provincetown, Mass., Olympia and San Diego, 33°; Indianola, Cape May, New Shoreham and Portland, Or., 35°. The *largest* are; Terry's Landing, 96°; Fort Benton, 5°; New Chicago, 90°; Fort Sully, 89°; Smithville, Dak., 88°; Fort Stevenson, 87°; Fort Assinaboine, Rapid City and Fort Keogh, 86°; Bismarck, 84°; Fort Washakie, 82°; Fort Buford, 81°; Fort Shaw, 80°; Rock Creek, 79°; Fort Missoula, 78°; St. Vincent, 77°; Huron and Helena, 75°; Fort Custer, 74°; Eagle Rock and North Platte, 72°; Yankton, 71°. The *daily* ranges varied in the different districts as follows: New England, 24° at Thatcher's Island to 33° at Boston and 37° at Burlington; Middle Atlantic States, 19° at Cape May to 27° at Williamsport and 30° at Sandy Hook, New York and Albany; South Atlantic States, 21° at Smithville to 27° at Charlotte and 33° at Augusta and Kittyhawk; Florida Peninsula, 15° at Key West to 22° at Punta Rassa and Cedar Keys; Eastern Gulf States, 21° at New Orleans to 25° at Vicksburg and 29° at Montgomery; Western Gulf States, 20° at Galveston and Port Eads to 33° at Mason and 36° at Fort Gibson; Rio Grande Valley, 27° at Brownsville to 31° at Uvalde and 38° at Rio Grande; Ohio Valley and Tennessee, 24° at Champaign to 31° at Pittsburg, Morgantown and Cincinnati and 33° at Knoxville; Lower Lake Region, 21° at Detroit and Sandusky to 29° at Rochester and 32° at Cleveland and Oswego; Upper Lake Region, 22° at Alpena to 26° at Milwaukee and 33° at Duluth; Upper Mississippi Valley, 24° at Keokuk to 30° at Des Moines, 32° at St. Paul and 36° at La Crosse; Missouri Valley, 25° at Springfield, Mo., to 31° at Omaha, 35° at Leavenworth and 39° at Yankton; Extreme Northwest, 34° at Moorhead to 36° at St. Vincent, 47° at Fort Stevenson and Bismarck and 48° at Fort Buford; Northern Slope, 37° at Cheyenne to 40° at Fort Keogh, 46° at North Platte and 59° at Fort Benton; Middle Slope, 22° on summit of Pike's Peak to 42° at Dodge City and Fort Elliott and 55° at West Las Animas; Southern Slope, 34° at Coleman City to 38° at Fort Griffin and Jacksboro and 43° at Henrietta and Stockton; Northern Plateau, 26° at Umatilla to 41° at Eagle Rock and 49° at Fort Missoula; Middle Plateau, 22° at Salt Lake City to 32° at Pioche and 40° at Winnemucca; Southern Plateau, 30° at Fort Grant to 41° at La Mesilla, 42° at Fort Verde and Florence and 46° at Prescott; North Pacific Coast Region, 17° at Portland to 21° at Olympia; Middle Pacific Coast Region, 13° at San Francisco to 23° at Sacramento and 29° at Red Bluff; South Pacific Coast Region, 28° at San Diego to 31° at Visalia and Los Angeles, 32° Yuma and 41° at Campo.

Frosts.—In the various districts they were reported on the following dates: New England, 1st to 12th, 14th to 28th; Middle Atlantic States, 1st to 12th, 14th to 20th, 22d to 28th; South Atlantic States, 1st to 3d, 5th to 7th, 22d to 26th; East Gulf States, 1st, 2nd, 5th, 6th, 7th, 10th, 22d, 23d, 24th; West Gulf States, 1st, 2d, 4th, 5th, 6th, 9th, 21st, 22d, 23d; Rio Grande Valley, 1st, 4th, 5th, 21st, 22d; Ohio Valley and Tennessee, 1st to 11th, 14 to 18th, 21st to 28th; Lower Lake Region, 1st to 12th, 14th to 28th; Upper Lake Region, 1st to 28th; Extreme Northwest, 1st to 28th; Upper Mississippi Valley, 1st to 28th; Missouri Valley, 1st to 15th, 21st to 26th;

Table of Comparative Minimum Temperatures for the Month of February.

State or Territory.	Minimum for February, 1882, Signal Service.		Lowest since Signal Service stations were opened—3 to 11 years.			Lowest from any other source.			
	Station.	Temp.	Station.	Temp.	Year.	Place.	Temp.	Year.	Length of Record.
Alabama	Montgomery	32	Montgomery	32	1875	Huntsville	-7	1832 & '36	9 years.
Arizona	Prescott	5	Prescott	-11	1880	Fort Canby	-12	1855	12 "
Arkansas	Little Rock	28	Little Rock	23	1881	Fort Smith	-4	1840	21 "
California	Campo	17	Campo	16	1877	Fort Bidwell	-18	1868	19 "
Colorado	Pike's Peak	-17	Pike's Peak	-37	1875	Fort Garland	-23		22 "
Do	West Las Animas	4	Denver	-20	1881				
Connecticut	New Haven	7	New Haven	-4	1881	Colebrook	-28	1861	9 "
Dakota	Fort Stevenson	-35	Pembina	-48	1876	Fort Abercrombie	-40	'61 & '69	15 "
Delaware	Delaware Breakwater	24	Delaware Breakwater	7	1881	Fort Delaware	0	1866?	44 "
Dist. of Columbia	Washington	20	Washington	-1.5	1875	Washington	-5		49 "
Florida	Pensacola	37	St. Marks	28	1875	Fort Barrancas	11	1852?	52 "
Georgia	Augusta and Atlanta	31	Atlanta	21	1881	Augusta Arsenal	-2	1835	48 "
Idaho	Eagle Rock	-29	Eagle Rock	-19	1881	Fort Hall	-11	1873?	3 "
Illinois	Champaign and Chicago	11	Chicago	-13	1875	Winnebago	-26	1864	11 "
Do						Fort Armstrong	-24	'30 & '35	9 "
Indiana	Indianapolis	15	Indianapolis	-8	1875	Sjiceland	-21	1866	7 "
Indian Territory	Fort Supply	12	Fort Supply	-8	1881	Fort Gibson	-13	1857?	46 "
Iowa	Des Moines	1	Dubuque	-31	1875	Guttenburg	-37	1868	4 "
Kansas	Dodge City	7	Dodge City	-10	1881	Fort Leavenworth	-28	1834?	43 "
Kentucky	Louisville	20	Louisville	0	1875	Newport Barracks	-20		27 "
Louisiana	Shreveport	33	Shreveport	23	'75 & '81	Fort Jesup	7	'23 & '38	23 "
Do						Baton Rouge	10	1852?	52 "
Maine	Eastport	-5	Eastport	-20	1876	Brunswick	-28	1869?	52 "
Maryland	Baltimore	23	Baltimore	4	'75 & '81	Fort McHenry	-4		43 "
Massachusetts	Springfield	3	Boston	-6	1876	Lunenburg	-26	1856	24 "
Do			Springfield	-6	1880	Williamstown	-20	1835?	55 "
Michigan	Marquette	2	Alpena	-27	1881	Ontonagon	-37	1861	11 "
Do			Marquette	-27	1876	Fort Brady	-47	1873	51 "
Minnesota	St. Vincent	-35	Breckenridge	-34	'75 & '79	Fort Ripley	-43	1860	14 "
Do			Duluth	-34	1875				
Mississippi	Vicksburg	32	Vicksburg	21	1875	Columbus	14		10 "
Missouri	Springfield	13	St. Louis	-3	1875	St. Louis	-25	1835	37 "
Do						Jefferson Barracks	-18	1835	35 "
Montana	Terry's Landing	-57	Fort Custer	-29	1881	Fort Ellis	-53	1872	6 "
Nebraska	North Platte	-4	North Platte	-23	1881	Fort McPherson	-24	1874	8 "
Do						Fort Kearney	-22	1852?	19 "
Nevada	Winnemucca	-17	Pioche	-5	1879	Fort Ruby	-19	1864?	5 "
Do			Winnemucca	-6	1880				
New Hampshire	Mount Washington	-21	Mount Washington	-42	1876	Stratford	-37	1861	11 "
Do						Dartmouth College	-33	1848?	18 "
New Jersey	Barneget	-18	Atlantic City	-5	1875	Newark	-7	1861	10 "
Do			Squan Beach	-5	1875				
New Mexico	Santa Fe	11	Santa Fe	-3	'79 & '80	Fort Union	-7		23 "
New York	Albany	7	Albany	-18	1875	Sackett's Harbor	-46	1861	8 "
Do						Belleville	-34	1835	15 "
North Carolina	Smithville	24	Kittyhawk	-11	1881	Fort Johnson	3	1835	54 "
Ohio	Cleveland	17	Toledo	-12	1875	Hillsborough	-22	1838	35 "
Do						Marietta	-18	1852?	63 "
Oregon	Umatilla	4	Umatilla	0	1881	Camp Harney	-16	1868	6 "
Pennsylvania	Philadelphia	18	Erie	-16	1875	Lewisburg	-23	'65 & '67	6 "
Do						Philadelphia	-2	1866	113 "
Rhode Island	Newport	10	Newport	-2	1881	Providence	-16	1866	35 "
South Carolina	Charleston	32	Charleston	-28	1881	Fort Moultrie	6	1835	38 "
Tennessee	Nashville	25	Knoxville	8	1875	Glenwood Cottage	-4	1864?	11 "
Texas	Fort Elliott	13	Fort Elliott	-1	1881	Fort McKavett	8	1873?	22 "
Utah	Salt Lake City	4	Salt Lake City	3	1880	Fort Crittenden	-6		3 "
Vermont	Burlington	-6	Burlington	-18	1881	Randolph	-31	1868	5 "
Virginia	Fort Myer	19	Fort Whipple	1	1881	Al-xandria	3	1856	11 "
Washington Ty.	Spokane Falls	-14	Spokane Falls	-7	1881	Fort Colville	-20	1862?	14 "
West Virginia	Morgantown	21	Morgantown	-10	1875				
Wisconsin	La Crosse	3	La Crosse	-34	1875	Fort Howard	-38	1823	30 "
Do						Superior City	-38	1863	3 "
Wyoming	Fort Washakie	-26	Cheyenne	-12	1881	Fort Fetterman	-40	1873	6 "
Do						Fort Laramie	-35	1864?	25 "

Northern Slope, 1st to 28th; Middle Slope, 1st to 9th, 12th, 14th to 17th, 19th, 21st to 27th; Southern Slope, 9th, 20th to 23d; Southern Plateau, 1st to 28th; Middle Plateau, 1st to 5th, 7th, 8th, 12th, 15th, 17th to 25th, 28th; Northern Plateau, 1st to 7th, 9th to 13th, 15th to 23d; North Pacific Coast Region, 1st, 2d, 3rd, 6th, 7th, 10th, 11th, 13th, 16th to 24th; Middle Pacific Coast Region, 2d, 3d, 4th, 7th, 8th, 10th, 11th, 13th, 14th, 15th, 17th to 23d; Southern Pacific Coast Region, 2d to 5th, 7th, 8th, 9th, 12th to 15th, 18th to 25th, 28th.

Ice.—Regarding its formation in the northern sections, this subject is considered elsewhere in the REVIEW under the head of *Ice in Rivers and Harbors*. The following are exceptional cases of its formation in the southern sections of the country: Princeton, Cal., 19th, $\frac{3}{4}$ inch thick; Fayette, Miss., 1st; Stateburg, S. C., 25th; Ashwood, Tenn., 22d to 25th; Charleston, S. C., 25th, one inch thick in some parts of the city; New River Inlet, N. C., 1st; Denison, Tex., 21st and 22d, on shallow pools; Little Rock, 21st; Memphis, 21st, 22d; Ft. Supply, Ind. Ty., 19th; 21st, $\frac{3}{4}$ inch thick on river; Ft. Elliott, Tex., 20th.

Low Temperatures.—Winnemucca, Nev., 18th, minimum temperature -17° , the lowest ever experienced at this place. The

following notable instances of extremely low temperatures were received too late to be published in the January REVIEW: Parker's Station, Burnt River, Or., January 29th, minimum temperature -26° ; lowest for many years. Canyon, City, Or., January 29th, minimum temperature -4° .

PRECIPITATION.

The general distribution of rain-fall over the United States and Canada for the month of February, 1882, is exhibited upon chart No. III from the reports of over 500 stations. From the table in the left hand corner of the chart is obtained a monthly average for each of the various districts, determined from the records of Signal Service stations, covering a period of several years, to which is subjoined a comparison of the present month with such averages. Upon comparison with the chart the tabulated averages show three areas of deficiency, and one large and irregular area of excess. The latter extends southwestward from the Canadian Maritime Provinces to central Texas, and thence directly west to the Pacific coast, the departures ranging from 0.25 inch in the South Pacific Coast Region to 3.16 inches in Tennessee, and 3.74 inches in the Ohio Valley. Within the central portion of this large area rains were continuous and excessive during the